

Reference No.: 34A
Barite Hill/Nevada Goldfields
EPA ID No. SCN000407714

Project Note	
Date: July 9, 2008	Project Number: TTEM1-05-003-0019
Name: Shanna Davis Firm: Tetra Tech EM Inc. Title: Environmental Scientist Time: 1126 Signature: <i>Shanna Davis</i>	
Subject: Tables from the REAC Field Activities Report	
<p style="text-align: center;">PROJECT NOTE SUMMARY</p> <p>The 2007 Field Activities Report prepared by Lockheed Martin, Technology Services under the Response Engineering and Analytical Contract (REAC) was downloaded from the following website: http://www.epaossc.net/doc_list.asp?site_id=2768. However, Tables 4, 5, 6, 7, and 13 were missing from the report. These tables were obtained from the REAC Task Leader Jonathan McBurney and are attached.</p>	
<p style="text-align: center;">RESPONSE REQUIRED</p> <p style="text-align: center;">(x) None () Phone call () Memo () Letter () Report</p>	
cc: File (x) Project Manager () Principal Investigator () Other (specify)	



TETRA TECH

Table 4. Stream Sediment Analytical Results
Barite Hill Gold Mine
McCormick County, SC
June 2007

	Sample Location	BH247-1		BH247-3		BH247-5		BH247-13		BH247-17		BH247-18		BH247-19		BH247-20	
		Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
ANALYTE	Mercury	0.14	U	0.23		0.44		0.26	U	0.16	U	0.13	U	0.16	U	0.2	U
	% Solids	74.0		68.0		69.0		39.0		62.0		79.0		61.0		51.0	
	Aluminum	8,400.0		6,400.0		4,500.0		15,000.0		4,600.0		4,000.0		7,600.0		13,000.0	
	Antimony	1.5	U,J,O	8.8	U,J,O	8.7	U,J,O	16.0	U,J,O	9.7	U,J,O	7.6	U,J,O	9.9	U,J,O	12.0	U,J,O
	Arsenic	48.0	J,O	23.0	J,O	28.0	J,O	5.0	R,O	4.0	J,O	1.3	U,J,O	3.3	J,O	2.0	U,J,O
	Barium	1,700.0		910.0		470.0		330.0		120.0		37.0		110.0		350.0	
	Beryllium	0.56	U,J,O	0.07	U,J,O	0.08	U,J,O	0.34	U,J,O	0.19	U,J,O	0.14	U,J,O	0.34	U,J,O	0.41	U,J,O
	Cadmium	0.19	J,O	0.8		0.87		44.0		0.61	J,O	0.63	U	2.8		0.16	R,O
	Calcium	930.0		350.0	J,O	230.0	J,O	450.0	J,O	180.0	J,O	280.0	J,O	610.0	J,O	1,000.0	
	Chromium	110.0		18.0		25.0		11.0		25.0		14.0		24.0		25.0	
	Cobalt	7.9		3.3	J,O	2.1	J,O	51.0		3.9	J,O	3.1	J,O	8.1	J,O	14.0	
	Copper	96.0	J,O	370.0	J,O	390.0	J,O	3,700.0	J,O	320.0	J,O	11.0	J,O	300.0	J,O	38.0	J,O
	Iron	52,000.0		45,000.0		79,000.0		15,000.0		14,000.0		6,900.0		22,000.0		16,000.0	
	Lead	270.0	J,O	41.0	J,O	55.0	J,O	35.0	J,O	15.0	J,O	9.7	J,O	26.0	J,O	29.0	J,O
	Magnesium	410.0	J,O	370.0	J,O	240.0	J,O	1,200.0	J,O	550.0	J,O	610.0	J,O	1,300.0		1,200.0	
	Manganese	340.0	J,O	160.0	J,O	150.0	J,O	140.0	J,O	150.0	J,O	120.0	J,O	230.0	J,O	390.0	J,O
	Nickel	2.5	J,O	1.5	J,O	0.88	J,O	12.0		1.6	J,O	1.8	J,O	4.2	J,O	4.9	J,O
	Potassium	150.0	J,O	100.0		62.0	J,O	170.0	J,O	53.0	J,O	75.0	J,O	140.0	J,O	300.0	J,O
	Selenium	1.5	U,J,O	1.3	U,J,O	1.6	U,J,O	9.0	U	1.4	U,J,O	4.4	U	5.7	U	1.6	U,J,O
	Silver	1.4	U	0.57	R,O	1.4	U	2.6	U	1.6	U	1.3	U	1.6	U	2.0	U
	Sodium	680.0	U	730.0	U	720.0	U	84.0	J,O	48.0	J,O	51.0	J,O	65.0	J,O	110.0	J
	Thallium	1.4	U,J,O	1.3	U,J,O	0.95	U,J,O	1.2	U,J,O	4.0	U	1.1	U,J,O	2.0	U,J,O	1.1	U,J,O
	Vanadium	81.0		48.0		53.0		30.0		28.0		22.0		48.0		55.0	
	Zinc	60.0	J,O	57.0	J,O	57.0		1,300.0	J,O	42.0	J,O	15.0	J,O	76.0	J,O	39.0	J,O
	Cyanide	3.4	U	0.16	U,J,O	0.54	J,O	6.4	U	4.0	U	3.2	U	4.1	U	4.9	U
	WAD Cyanide	4.1	U	3.6	U	4.2	U	5.1	U	0.18	J,O	3.4	U	4.8	U	3.9	U

All results are given in milligrams per kilogram (mg/kg) dry

U - Under MDL

MDL - Minimum Detection Limit

J - Estimated

O - Other Qualifier, See Appendix B For Full Data Report and Definition of Qualifiers.

Qual - Qualifier

na - Not Available

Table 4. Stream Sediment Analytical Results (Continued)
Barite Hill Gold Mine
McCormick County, SC
June 2007

	Sample Location	BH247-21		BH247-22		BH247-25		BH247-26		BH247-27		BH247-28		BH247-29		BH247-521	
		Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
ANALYTE	Mercury	0.13	U	0.13	U	0.14	U	0.14	U	0.17	U	0.14	U	0.13	U	0.14	U
	% Solids	78.0		77.0		70.0		72.0		59.0		69.0		79.0		69.0	
	Aluminum	3,700.0		2,500.0		12,000.0		8,100.0		10,000.0		13,000.0		8,400.0		5,600.0	
	Antimony	7.7	U,J,O	7.8	U,J,O	8.5	U,J,O	8.3	U,J,O	10.0	U,J,O	8.6	U,J,O	7.6	U,J,O	8.7	U,J,O
	Arsenic	2.4	J,O	0.92	J,O	11.0	J,O	1.4	U,J,O	27.0	J,O	3.6	J,O	3.7	J,O	2.5	J,O
	Barium	71.0		20.0	J,O	990.0		64.0		2,200.0		150.0		71.0		220.0	
	Beryllium	0.17	U,J,O	0.13	U,J,O	0.33	U,J,O	0.25	U,J,O	0.17	U,J,O	0.62	U,J,O	0.34	U,J,O	0.19	U,J,O
	Cadmium	0.44	J,O	0.39	J,O	0.32	J,O	0.69	U	0.15	J,O	0.05	R,O	0.27	J,O	0.69	J,O
	Calcium	310.0	J,O	170.0	J,O	420.0	J,O	540.0	J,O	290.0	J,O	2,100.0		980.0		530.0	J,O
	Chromium	20.0		16.0		36.0		11.0		13.0		80.0		17.0		18.0	
	Cobalt	6.6		3.0	J,O	20.0		6.6	J,O	3.3	J,O	19.0		8.9		7.7	
	Copper	57.0	J,O	54.0	J,O	180.0	J,O	10.0	J,O	220.0	J,O	28.0	J,O	110.0	J,O	110.0	J,O
	Iron	16,000.0		8,900.0		37,000.0		13,000.0		41,000.0		56,000.0		23,000.0		14,000.0	
	Lead	12.0	J,O	8.3	J,O	55.0	J,O	12.0	J,O	110.0	J,O	18.0	J,O	18.0	J,O	22.0	J,O
	Magnesium	520.0	J,O	410.0	J,O	3,300.0		840.0		340.0	J,O	2,700.0		860.0		780.0	
	Manganese	400.0	J,O	180.0	J,O	620.0	J,O	150.0	J,O	270.0	J,O	1,600.0	J,O	330.0	J,O	550.0	J,O
	Nickel	2.0	J,O	1.3	J,O	6.8		2.7	J,O	2.2	J,O	5.6	J,O	3.6	J,O	2.7	J,O
	Potassium	61.0	J,O	41.0	J,O	140.0	J,O	140.0	J,O	210.0	J,O	340.0	J,O	170.0	J,O	99.0	J,O
	Selenium	4.5	U	0.97	U,J,O	2.9	U,J,O	4.8	U	3.1	U,J,O	5.0	U	3.8	U,J,O	5.1	U
	Silver	1.3	U	1.3	U	1.4	U	1.4	U	1.7	U	1.4	U	0.99	J,O	1.4	U
	Sodium	640.0	U	42.0	J,O	710.0	U	59.0	J,O	850.0	U	38.0	J,O	61.0	J,O	68.0	J,O
	Thallium	3.2	U	3.2	U	1.3	U,J,O	3.5	U	1.2	U,J,O	2.1	U,J,O	1.1	U,J,O	3.6	U
	Vanadium	34.0		24.0		74.0		39.0		65.0		150.0		55.0		31.0	
	Zinc	29.0	J,O	25.0	J,O	74.0	J,O	17.0	J,O	36.0	J,O	33.0	J,O	26.0	J,O	39.0	J,O
	Cyanide	3.2	U	3.2	U	3.6	U	3.5	U	4.3	U	3.6	U	3.2	U	3.6	U
	WAD Cyanide	3.2	U	3.2	U	3.8	U	3.7	U	3.8	U	3.6	U	3.2	U	3.7	U

All results are given in milligrams per kilogram (mg/kg) dry

U - Under MDL

MDL - Minimum Detection Limit

J - Estimated

O - Other Qualifier, See Appendix B For Full Data Report and Definition of Qualifiers.

Qual - Qualifier

na - Not Available

Table 4. Stream Sediment Analytical Results (Continued)
Barite Hill Gold Mine
McCormick County, SC
June 2007

	Sample Location	BH247-525		BH247-529		BH247-6		BH247-7		BH247-8	
		Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
ANALYTE	Mercury	0.15	U	0.13	U	0.15	U	0.14	U	0.28	J,O
	% Solids	68.0		77.0		67.0		73.0		64.0	
	Aluminum	14,000.0		9,000.0		6,400.0		9,200.0		27,000.0	J,O
	Antimony	8.8	U,J,O	7.8	U,J,O	8.9	U,J,O	8.2	U,J,O	9.4	U,J,O
	Arsenic	11.0	J,O	7.1	J,O	7.3	J,O	1.4	R,O	1.6	U
	Barium	980.0		52.0		470.0		150.0		230.0	
	Beryllium	0.52	U,J,O	0.5	U,J,O	0.21	U,J,O	0.24	U,O	0.34	U,J,O
	Cadmium	0.37	J,O	0.25	J,O	3.3		0.08	R,O	1.9	
	Calcium	420.0	J,O	940.0		440.0	J,O	1,100.0		1,400.0	
	Chromium	70.0		25.0		11.0		11.0		5.8	
	Cobalt	23.0		8.2		5.4	J,O	7.8		10.0	
	Copper	200.0	J,O	39.0	J,O	300.0	J,O	30.0	J,O	540.0	J,O
	Iron	49,000.0		35,000.0		13,000.0		15,000.0		34,000.0	
	Lead	51.0	J,O	21.0	J,O	46.0	J,O	47.0	J,O	13.0	
	Magnesium	3,700.0		920.0		560.0	J,O	1,300.0		15,000.0	
	Manganese	600.0	J,O	270.0	J,O	100.0	J,O	360.0	J,O	620.0	
	Nickel	7.5		3.8	J,O	2.4	J,O	3.2	J,O	7.3	
	Potassium	140.0	J,O	180.0	J,O	110.0	J,O	170.0	J,O	87.0	J,O
	Selenium	2.5	U,J,O	2.1	U,J,O	5.2	U	4.8	U	5.5	U
	Silver	1.5	U	1.3	U	1.5	U	1.4	U	1.6	U
	Sodium	730.0	U	60.0	J,O	49.0	J,O	58.0	J,O	65.0	U,J,O
	Thallium	1.5	U,J,O	1.7	U,J,O	3.7	U	3.4	U	3.9	U
	Vanadium	110.0		86.0		29.0		34.0		39.0	
	Zinc	85.0	J,O	27.0	J,O	110.0	J,O	47.0	J,O	280.0	J,O
	Cyanide	3.7	U	3.2	U	3.7	U	0.22	U,J,O	3.9	U,R,O
	WAD Cyanide	2.2	J,O	3.2	U	3.8	U	3.2	U	0.16	U,J,O

All results are given in milligrams per kilogram (mg/kg) dry

U - Under MDL

MDL - Minimum Detection Limit

J - Estimated

O - Other Qualifier, See Appendix B For Full Data Report and Definition of Qualifiers.

Qual - Qualifier

na - Not Available

Table 5. Relative Elevation Survey - Main Pit to Stream
Barite Hill Gold Mine
McCormick County, SC
June 2007

Location	Relative Elevation (feet)
Water Level @ Main Pit Edge	100.0
Water Level @ Stream Edge	76.6
Water Level @ Stream Edge at BH247-9	75.4
Water Level @ Main Pit Edge	100.0

Closure Error (feet): 0.026

Note: Water Level was given arbitrary elevation of 100 ft in order to determine the relative height between the water level and the stream elevation.

Table 6. Stream Channel Water Flow Rate
Barite Hill Gold Mine
McCormick County, SC
June 2007

Location	Method	Flow Rate (gpm)
BH247-1	Channel Area/Velocity	Negligable
BH247-2	Channel Area/Velocity	0.26
BH247-3	Channel Area/Velocity	0.39
Seep Under Tree	Defined Measure	0.1
At Seep In Stream	Channel Area/Velocity	1.6
BH247-4	Channel Area/Velocity	3
BH247-7	Defined Measure	1.4
BH247-8	Defined Measure	4.2

gpm - gallons per minute

Table 7. Water Balance Calculation Results
Barite Hill Gold Mine
McCormick County, SC
June 2007

Date	Measured Elevation Change (Ft)	Calculated Change (Gal)	Calculated Loss Due to Evaporation (Gal)	Estimated Loss Due to Creek (gpm)	Estimated Loss to Creek (Gal)	Gain due to Rainfall (Gal)	Other Water Influx (Gal)	Water Influx (gpm)
4/5/07	-0.025	-65,574	68,425	5	7,200	0	10,051	7
4/10/07	-0.011	-29,071	68,425	5	7,200	0	46,554	32
4/11/07	0.024	63,427	68,425	5	7,200	94,700	44,352	31
4/13/07 - 4/14/07	0.060	158,567	68,425	5	7,200	187,198	46,995	33
4/20/07	-0.014	-36,999	68,425	5	7,200	0	38,626	27
4/25/07	-0.015	-39,642	68,425	5	7,200	0	35,983	25
4/30/07	-0.021	-55,499	68,425	5	7,200	0	20,126	14
5/4/07	0.046	121,568	77,775	5	7,200	158,567	47,976	33
5/10/07	-0.013	-34,356	77,775	5	7,200	0	50,619	35
5/15/07	-0.023	-60,784	77,775	5	7,200	0	24,191	17
5/20/2007	-0.019	-50,213	77,775	5	7,200	0	34,762	24

gal - Gallons
gpm - Gallons per minute
Ft - Feet

Note: The Measured Elevation Change is the difference between the level at time 00:00 and time 23:59 on the day noted. For 4/13/07 to 4/14/07, an equivalent 24 hour level change was chosen to include the rainfall event.

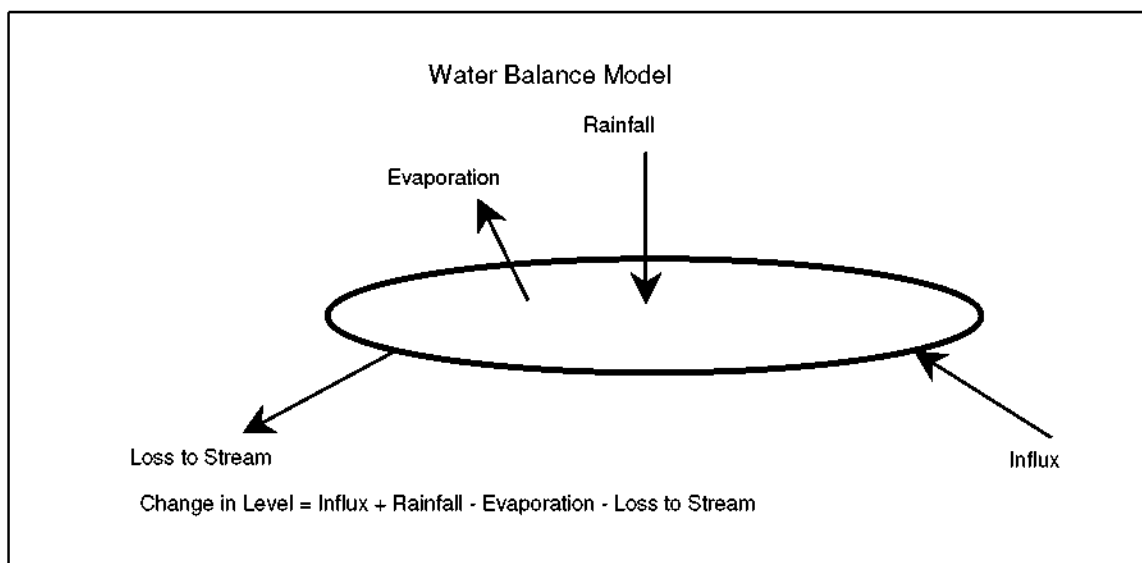


Table 13. Process Area Process Pond Leakage Detection Pit Water Sample Analytical Results
Barite Hill Gold Mine
McCormick County, SC
June 2007

	Sample Location	AL		ZL (AL Duplicate)		BL		CL		DL	
		Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.	Result	Qual.
ANALYTE	Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
	Aluminum	110.0	J,O	140.0	J,O	120.0	J,O	41.0	U,J,O	17,000.0	
	Antimony	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
	Arsenic	8.1	J,O	4.3	R,O	10.0	U	4.0	R,O	10.0	U
	Barium	16.0	J,O	17.0	J,O	33.0	J,O	20.0	J,O	12.0	J,O
	Beryllium	5.0	U	5.0	U	5.0	U	5.0	U	0.38	U,J,O
	Cadmium	0.17	U,J,O	0.2	U,J,O	0.38	U,J,O	0.68	U,J,O	3.6	U,J,O
	Calcium	14,000.0		14,000.0		21,000.0		13,000.0		38,000.0	
	Chromium	0.93	U,J,O	1.1	U,J,O	10.0	U	10.0	U	5.2	U,J,O
	Cobalt	3.7	J,O	3.5	J,O	31.0	J,O	11.0	J,O	130.0	
	Copper	100.0		110.0		730.0		120.0		320.0	
	Iron	130.0		150.0		210.0		180.0		450.0	
	Lead	10.0	U	3.8	U,J,O	10.0	U	10.0	U	4.6	U,J,O
	Magnesium	800.0	J,O	810.0	J,O	940.0	J,O	620.0	J,O	3,000.0	J,O
	Manganese	47.0		48.0		220.0		100.0		330.0	
	Nickel	130.0		140.0		96.0		93.0		150.0	
	Potassium	17,000.0	J,O	17,000.0	J,O	12,000.0	J,O	12,000.0	J,O	11,000.0	J,O
	Selenium	57.0		56.0		110.0		110.0		44.0	
	Silver	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
	Sodium	600,000.0		590,000.0		370,000.0		380,000.0		270,000.0	
	Thallium	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
	Vanadium	0.46	J,O	0.53	J,O	1.2	J,O	0.57	J,O	1.3	J,O
	Zinc	12.0	U,J,O	14.0	U,J,O	24.0	U,J,O	5.1	U,J,O	210.0	
	Cyanide	6.4	U,J,O	10.0	U	3.7	U,J,O	2.3	U,J,O	11.0	
	WAD Cyanide	10.0	U	10.0	U	10.0	U	2.3	U,J,O	4.9	U,J,O

All results are given in microgram per liter (ug/L)

U - Under MDL

MDL - Minimum Detection Limit

J - Estimated

O - Other Qualifier, See Appendix B For Full Data Report and Definition of Qualifiers.

Qual - Qualifier

WAD - Weak Acid Dissociable